

AMENDMENTS TO THE CLAIMS

A listing of the claims presented in this patent application appears below. This listing replaces all prior versions and listing of claims in this patent application.

Claim 1 (currently amended): A thermoelectric transducing material comprising a layered cobaltite based substance ~~represented by the chemical formula $A_x\text{CoO}_2$, wherein $[[A]]$~~ the layered cobaltite based substance is structured such that at least one $A'\text{CoO}_2$ layer and at least one $A''\text{CoO}_2$ layer are stacked in a layer thickness direction, and A' and A'' are each consists of ~~an element or element group selected from alkali metal elements and or alkaline earth group elements, and $[[is]]$ compositionally modulated in a thickness-wise direction of layers in a structure of the layered cobaltite based substance~~ A' and A'' are different elements.

Claim 2 (currently amended): The thermoelectric transducing material according to claim 1, wherein a composition ratio of A' and a composition ratio of A'' are each value of x ~~representing a composition ratio of A is not less than 0.2 and not more than 1.~~

Claim 3 (currently amended): The thermoelectric transducing material according to claim 2, wherein the composition ratio of A' and the composition ratio of A'' are each value of x ~~representing a composition ratio of A is not less than 0.3 and not more than 0.7.~~

Claim 4 (currently amended): The thermoelectric transducing material according to claim 3, wherein the composition ratio of A' and the composition ratio of A'' are each value of x ~~representing a composition ratio of A is not less than 0.4 and not more than 0.6.~~

Claim 5 (canceled).

Claim 6 (original): The thermoelectric transducing material according to claim [[5]] 1, wherein the layered cobaltite based substance is structured such that a plurality of $A'\text{CoO}_2$ layers and a plurality of $A''\text{CoO}_2$ layers are alternatively stacked in the layer thickness layering of $A_x\text{CoO}_2$ layers corresponding to the respective kinds of elements or element groups is repeated in a layering direction.

Claims 7 and 8 (canceled).

Claim 9 (currently amended): The thermoelectric transducing material according to claim [[8]] 1, wherein [[A]] A' is an alkali metal element or element group consisting of an alkali metal element, while and A'' is an alkaline earth element or element group consisting of an alkali earth group element.

Claim 10 (currently amended): The thermoelectric transducing material according to claim 9, wherein a thermoelectric transduction ~~thermoelectric trasduction~~ power factor P is $1.5 \text{ mW/K}^2\text{m}$ or more.

Claim 11 (currently amended): The thermoelectric transducing material according to claim [[8]] 1, wherein [[A]] A' is an element or element group consisting of an alkali metal element and a thickness of the $A'_x\text{CoO}_2$ $A'\text{CoO}_2$ layer is not less than 1 nm and not more than 3 nm.

Claim 12 (currently amended): The thermoelectric transducing material according to claim [[8]] 1, wherein A'' is an element or element group consisting of an alkali earth group element and a thickness of the $A''_x\text{CoO}_2$ $A''\text{CoO}_2$ layer is not less than 2 nm and not more than 8 nm.

Claim 13 (currently amended): The thermoelectric transducing material according to claim [[8]] 1, wherein a thickness of the A'_xCoO_2 $A'CoO_2$ layer is not less than 1 nm and not more than 3 nm, while a thickness of the A''_xCoO_2 $A''CoO_2$ layer is not less than 2 nm and not more than 8 nm.

Claim 14 (original): The thermoelectric transducing material according to claim 13, wherein the thermoelectric transduction power factor P is 2 mW/K²m or more.

Claim 15 (currently amended): The thermoelectric transducing material according to claim [[9]] 1, wherein [[A]] A' is Na and A" is Sr.

Claim 16 (currently amended): The thermoelectric transducing material according to claim [[9]] 1, wherein [[A]] A' is Na and A" is K.

Claim 17 (currently amended): The thermoelectric transducing material according to claim [[9]] 1, wherein [[A]] A' is Na and A" is Ca.

Claim 18 (currently amended): The thermoelectric transducing material according to claim [[9]] 1, wherein [[A]] A' is Na and A" is Ba.

Claim 19 (currently amended): The thermoelectric transducing material according to claim [[9]] 1, wherein [[A]] A' is K and A" is Ca.

Application No.: 10/730,096

Claim 20 (currently amended): The thermoelectric transducing material according to claim [[9]] 1, wherein [[A]] A' is K and A" is Sr.

Claim 21 (currently amended): The thermoelectric transducing material according to claim [[9]] 1, wherein [[A]] A' is K and A" is Ba.

Claim 22 (currently amended): The thermoelectric transducing material according to claim [[9]] 1, wherein [[A]] A' is Ca and A" is Sr.

Claim 23 (currently amended): The thermoelectric transducing material according to claim [[9]] 1, wherein [[A]] A' is Ca and A" is Ba.

Claim 24 (currently amended): The thermoelectric transducing material according to claim [[9]] 1, wherein [[A]] A' is Sr and A" is Ba.

Claims 25-27 (canceled).